

ARBORICULTURAL IMPACT ASSESSMENT, PROTECTION PLAN AND METHOD STATEMENT

SITE:	LOWER ROAD, BREACHWOOD GREEN
SURVEY DATE:	21 AUGUST 2025
REPORT DATE:	11 SEPTEMBER 2025
OUR REFERENCE:	43-2123-8/13/2025 (B)
ON BEHALF OF:	Jon Read, Pentangle Design,
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DIGITALLY APPENDED TREE PROTECTION PLAN (IN PDF FORMAT)	

ABBREVIATIONS

AIA	Arboricultural Impact Assessment	CMS	Construction Method Statement
AMS	Arboricultural Method Statement	RICS	Royal Institute of Chartered Surveyors
BRE	Building Research Establishment	RPA	Root Protection Area
BS	British Standard	TPBE	Trees and People in the Built Environment
CCS	Cellular Confinement System	TPO	Tree Preservation Order
CEZ	Construction Exclusion Zone	TPP	Tree Protection Plan



1. INTRODUCTION

- 1.1. Harrison Arboriculture Ltd. was commissioned to provide an arboricultural report to include an arboricultural impact assessment, tree protection plan and preliminary method statement for development proposals at Land at Colemans Green and Lower Road, Breachwood Green by Jon Read of Pentangle Design.
- 1.2. The site lies within the administrative area of North Hertfordshire District Council.

2. TERMS OF REFERENCE

- 2.1. To provide an assessment of the trees on and around the site regarding their suitability for retention within the context of the development based on the details provided. It assesses which of those will either have an impact on and/or be impacted upon by the development. The report includes methods by which those impacts can be mitigated if they are available and adheres to the recommendations provided in British Standard 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' (BS 5837)
- 2.2. The report includes:

An Arboricultural Survey

The survey provides a plan indicating the size and positions of the trees present at the time of the survey on and close to the site. They are plotted and scaled based on the topographical survey provided by Terrain Surveys reference TS24-526-1, the final plan will be at 1:500 or larger as per RICS specification, it provides:

- Identification details and assessment of the current condition of trees within and close to the red line site.
- Recommendations for remedial works necessary and available to maintain their health and/or safety within the context of the development (for trees within the ownership of the applicants).
- Categorisation as per BS 5837 : 2012.

An Impact Assessment (AIA) / Constraints Plan



Based on the tree survey and proposed layout as illustrated by drawing reference 3870 05C Proposed Site Plan provided by Pentangle Design. The impact assessment provides:

- Details of tree loss and works (if any) required in implementing the proposed design.
- Identification of both above and below ground activities proposed in the vicinity of retained trees which may be potentially damaging e.g. removal of existing structures, the installation of hard surfacing, services installation and the location and dimensions of all proposed excavations or changes in ground level, including those necessary for the implementation of the recommended mitigation measures.
- The practicability of the scheme regarding access, adequate working space and provision for the storage of materials.
- Theoretical Root Protection Areas (RPA's) denoted as nominal circular areas centred on the trunk for all trees categorised A and B will be listed in the tree schedule.
- The RPA's for trees categorised C will be included in the tree schedule but will only be relevant where they are not under the ownership or management of the applicant or where they are to be retained within the development.

A Tree Protection Plan (TPP)

This will provide:

- Recommendations for the construction and positioning of suitable tree protection. It includes barrier fencing and both permanent and temporary ground protection where appropriate based on the AIA.
- The report will include possible methods to mitigate the adverse impacts of the development. The TPP illustrates the areas within or close to the RPA's within which measures are necessary to protect the root areas of retained trees.

Predicted impacts plan

- The predicted impacts are provided on plan reference 43-2123-8/13/2025 (B) TPP and assess the expected impacts of the retained trees post development.



The shade prediction is based on guidance provided by Building Research Establishment (BRE) in Site Layout Planning For Daylight and Sunlight - A guide to good practice.

An Arboricultural Method Statement

This will provide a precautionary approach appropriate to the proposals. It will describe the methods and sequence of tree protection that should be adopted in order to demonstrate that the operations can be undertaken with minimal risk of adverse impact on trees to be retained. It may require relevant information from other specialists. It will include some or all of the following:

- any operations proposed within the RPA (or crown spread where this is greater);
- removal of existing structures and hard surfacing;
- installation of temporary ground protection ;
- excavations and the requirement for specialised trenchless techniques ;
- installation of new hard surfacing including materials, design constraints and implications for levels;
- specialist foundations including installation techniques and the effect on finished floor levels and overall height;
- retaining structures to facilitate changes in ground levels;
- preparatory works for new landscaping;
- An auditable/audited system of arboricultural site monitoring, including a process by which adherence to the agreed methods and phasing within this report can be monitored;
- A schedule of specific site events requiring specialist arboricultural input or supervision; and
- A list of contact details for the relevant parties.

2.3. The scope and limitations of the report are listed in Appendix B – Generic



Information.

3. DOCUMENTS SUPPLIED

Table 1 - Document summary

Document Title	Provided by	Reference
Topographical Survey	Terrain Surveys	TS24-526-1
Location plan and Existing Site Plan	Pentangle Design	3870 01A
Proposed Site Plan	Pentangle Design	3870 05C

4. PROTECTION STATUS

- 4.1. Trees subject to constraints such as Tree Preservation Orders and Conservation Areas are protected under the law. It is suggested that written confirmation from North Hertfordshire District Council is sought formally establishing the legal status of these trees prior to any works being undertaken outside the remit of an approved planning application.



ARBORICULTURAL IMPACT ASSESSMENT

5. DEVELOPMENT / SITE APPRAISAL

- 5.1. The site is disused dwelling with wooden garage within substantial gardens, now overgrown at Lower Road, Breachwood Green. It was surveyed on 8 August 2025.
- 5.2. The development proposal is for the division of the site into three plots, refurbishing the existing dwelling and the construction of two further detached dwellings with a communal parking area accessed via the existing access from Lower Road.
- 5.3. The site is broadly flat with no significant slopes, humps or dips which require alteration. There are a number of C grade trees within and close to the site boundary and an offsite B grade tree to west.

6. TREE CATEGORISATION

- 6.1. The method of categorisation as provided by BS5837 can be found at Appendix A. The following is a summary of the trees present on the site and their grade (table 1). A and B category trees are a material consideration in the development process; the subcategories 1, 2 and 3 are intended to reflect arboricultural, landscape and cultural values respectively.

Table 2 - Tree Category Summary

C1	11		A	0
C2	0		B	1
C3	0		C	11
B1	0		U	0
B2	1		Total	12
B3	0			
A1	0		T	9
A2	0		G	3
A3	0		H	0
U	0		W	0
Total	12		Total	12



7. DEVELOPMENT IMPLICATIONS

- 7.1. The primary criterion, in Arboricultural terms, is the retention of as many appropriate trees as practicable, allowing development to proceed whilst providing them with space and protection both during and subsequent to the completion of the development. The following is an assessment of the likely impact of the development on trees which are worthy of retention and guidance on the type and extent of protection required to ensure their continued wellbeing within the proposed development and the future landscape.
- 7.2. Most tree roots are typically found in the upper 600mm of soil and any excavation or compaction of the ground within these areas has the potential to damage roots and impact the future health and potentially the stability of the trees.
- 7.3. Soil levels over tree root areas must be left largely unaltered and the soil structure maintained. The recommended root protection area is the theoretical space required sufficient to maintain tree health.
- 7.4. Trees 1-5, 8 and groups 7 and 10 require removal to facilitate the proposal. All are low quality C grade trees. Their loss can be mitigated by the inclusion of tree planting within the landscape proposal.
- 7.5. The proposed parking spaces assigned to plots 2 and 3 lie within the RPA of offsite tree no. 12.
- 7.6. A Cellular confinement system (CCS) installed using “no dig” techniques and of a sufficient depth appropriate to the vehicles expected to use the access will be installed as described in section 10 to provide a surface with sufficient rigidity to spread loads and prevent soil compaction or rutting. Water permeation into the root area will be maintained by the use of a permeable surface.
- 7.7. The prohibition on excavation within the RPA also applies to kerbing. Kerbing must also lie over the existing ground level and pegged into place. Excavation for a concrete kerb bed is not viable. Spikes through the kerb and geotextile



separation layer or support posts sunken 600mm into post holes on the outside of the kerbing reduces the area disturbed.

- 7.8. The existing garage building is well outside the RPAs of the retained trees and can be removed without impact.
- 7.9. The proposed construction, including ground works can be undertaken without impacting the retained trees.

8. SERVICE RUNS

- 8.1. There are existing services supplying the site which will be utilised for the new proposal.
- 8.2. Should additional underground electricity, gas or foul and grey water services be required, they will require routing well outside the protection areas of trees which are to be retained. If the route is likely to pass close to or within the RPA's of the retained trees prohibitions on excavation within the RPA's applies. A specific method statement will be required describing the method to be used to minimise any root damage. These may potentially involve hand digging within the root areas and laying pipework between any significant roots or moling from a position outside the RPA's

9. SITE PARKING, SITE HUTS, MIXING AND MATERIAL STORAGE AREAS

- 9.1. All deliveries, material storage and contractor parking shall make use of the existing accesses and hard surfaces. Materials must not be stored within the root protection areas indicated by the CEZ as illustrated on plan reference 43-2123-8/13/2025 (B) TPP and marked by barrier fence on site. If additional space is required for the storage and/or mixing of building materials within or close to the RPA's of the retained trees, sufficient ground protection must be installed to prevent soil compaction and/or contamination by any spillage.
- 9.2. If site huts are to be used they shall be sited away from the RPA's of retained trees. Site huts in close proximity to the existing tree protective barrier line which require siting on unsurfaced ground, shall have appropriate footings or be



situated on a temporary surface. This is to reduce the potential for ground compaction. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

- 9.3. If it is proposed that site huts, ground protection or stores are to be located within the RPA of retained trees for more than 3 months, a temporary irrigation and aeration system will be installed to ensure that the rooting environment is maintained in a good condition. The system will include a compressible layer of composted wood chip or forest bark over a geotextile separation layer, on which ground protection or site huts can be placed. Watering will depend on permeability of the soil, weather conditions and the extent of the area covered, but should include weekly watering from April to September, when no rainfall has occurred for more than four consecutive days.

10. TREE PROTECTION

- 10.1. Exclusion of construction activity from the unprotected recommended root protection areas from the outset will ensure those trees identified for retention are maintained in a safe and healthy condition preventing the following. They should be retained in place for the duration of the development to prevent:

- Root severance
- Damage to the bark, branches and trunks
- Compaction of the soil within the Construction Exclusion Zone
- Alterations in soil level
- Soil contamination by phytotoxic materials such as herbicides, petrol, oils, diesel, cement and concrete washings or other construction additives

Barrier Fence

- 10.2. Tree protection barriers will be erected prior to the construction process and shall remain in place until completion of the development. Signs will be attached informing all site staff that the area is to remain fenced, examples of signage can

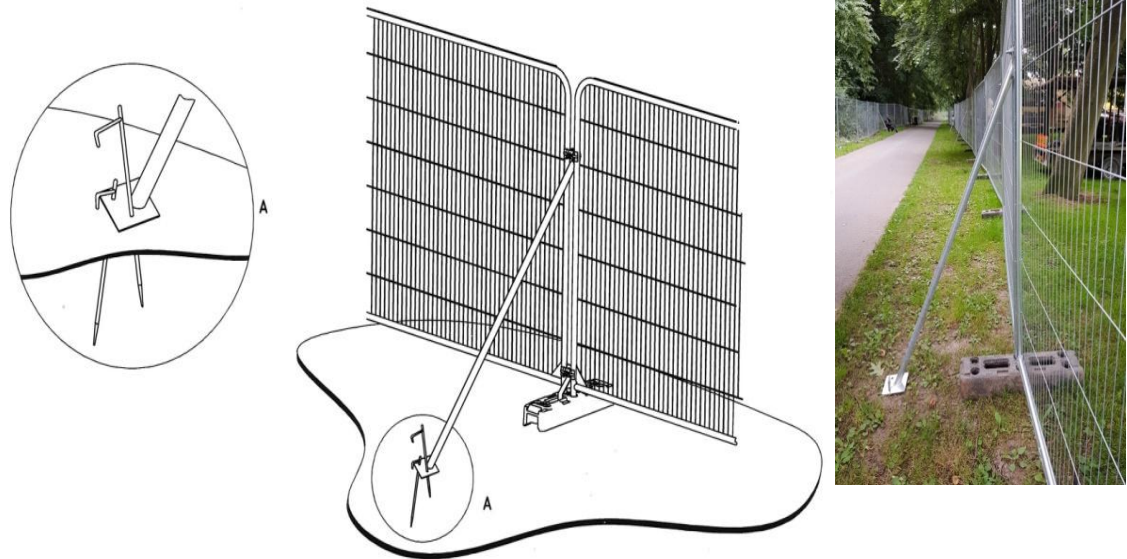


be found at the end of this document which can be laminated or generic signs can be purchase on line.

- 10.3. The barrier fence in accordance with BS5837 2012 Section 6 Figure 3 (figure 1) is considered fit for purpose for this site given the size of the development and the degree of works taking place in proximity to the retained trees. The position of the Tree Protection Fencing is shown on the Tree Protection Plan reference is 43-2123-8/13/2025 (B) TPP appended at the end of this document. This should be constructed with weld mesh panels, at least 2m high, securely fixed together with wire or scaffold clamps and braced with ground anchored supports at a maximum spacing of one every two Heras panels (every 6m) to brace the fence sufficiently to resist impacts. The BS figure has been reproduced at the end of this section.
- 10.4. Any adjustments or removals of the tree protection measures will only be carried out following consultation and agreement with the project arboriculturalist and/or the Local Authority tree officer.
- 10.5. The following shall apply to the areas within the tree protection area:
- No mechanical excavation and excavation by other means only with Arboricultural supervision
 - Hand digging shall only be carried out following a written method statement approved by the project arboriculturist
 - No adjustment to ground levels,
 - No storage of plant or material,
 - No storage or handling of any chemicals including cement washing,
 - No vehicular access,
 - No fires.



Figure 1 - (BS5837 Figure 3) example of fence stabilization system



a) Stabilizer strut with base plate secured with ground pins

11. Ground Protection

- 11.1. Ground protection will be required where construction activity within or access across the RPA's is necessary. This is to prevent root damage and soil disturbance or compaction and is required for the duration of the development. This will be temporary where incursion is to facilitate the construction and permanent where traffic over the root area is required subsequent to the completion of the development.
- 11.2. Permanent ground protection is required to facilitate the proposed parking spaces within the RPA of offsite tree 12. Temporary ground protection is not required for this site.

Permanent Ground Protection

- 11.3. Most tree roots are typically found in the upper 600mm of soil and the traditional construction of roads and paths which require excavation of the soil and compaction of multiple load bearing sub layers is not available within such areas. In addition increasing the depth of soil over the roots can impede the



movement of oxygen and water to the root area. Therefore soil levels over tree root areas must be left largely unaltered.

- 11.4. Where construction activity is necessary close to trees for example roads, driveways, paths and parking areas (within or close to the recommended RPA's) ground protection is required to prevent root damage, disturbance of the soil structure and/or compaction.
- 11.5. A Cellular confinement system (CCS) allows a "no dig" solution, providing a surface with sufficient rigidity to spread loads and prevent significant soil compaction and rutting. Cellweb TM or ACO Ground Guard (figure 2) are examples of suitable systems.
- 11.6. When installing a CCS using 'no dig' techniques it should be a minimum distance of 500mm from the tree base, no more than 5m wide and there must be:
 - No excavation within the root protection area – roots must not be cut, ripped, broken or severed.
 - No soil stripping or grading within the root protection area – ground levels must not be changed
 - No compaction within the root protection area – all traffic must be excluded from the area
 - CCS construction should not be undertaken while soil is saturated as it is less prone to compaction when dry.
- 11.7. Prior to commencing any construction, including surface protection, protective fencing must be erected around trees as per section 9 in positions denoted on plan reference 43/2123/8/13/2025 TPP to form an exclusion zone. This will ensure roots within the exclusion zone will not be severed and the soil will not be compacted during the construction work, allowing continued water permeation and oxygen diffusion to the soil beneath.

Permanent Ground Protection Construction

- 11.8. The CCS must be installed at ground level. High spots must not be graded off



and hollows should be filled with clean sharp sand. This may raise final levels which should be considered by architects and designers.

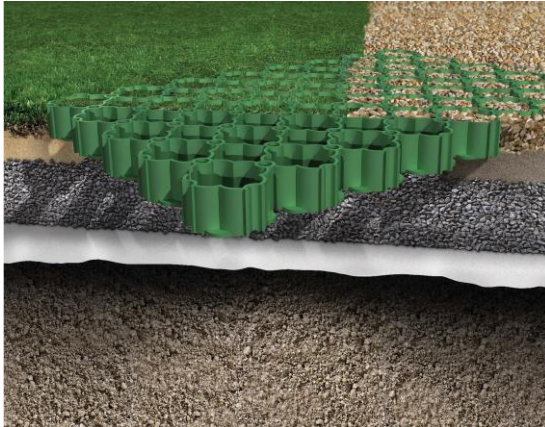
11.9. Once the surface layer has been removed there should be no vehicular movement over the root area until the CCS has been installed and then only those for which it has been designed.

11.10. The CCS will be installed in the following sequence.

- Following the removal of the existing surface layer the structure will be constructed over a geotextile separation layer placed on the ground. This prevents material being pressed into the underlying soil.
- The prohibition on excavation within the RPA also applies to kerbing. Kerbing may be concrete or wooden but in any case, must lie over the existing ground level and pegged into place using spikes through the geotextile separation layer. This will contain the cellular confinement system preventing lateral spread.
- A three-dimensional CCS made out of High-Density Polyethylene (HDPE) and conforming to ISO 13426-1:2003 is placed over the geotextile separation layer. The CCS requires expanding to its maximum and secured to the kerbing and filled with no fines angular aggregate.
- The required thickness of CCS is dependent on the California Bearing Ratio (CBR) of the soil. Typically, 100mm in depth is sufficient to support light traffic such as cars and light vans for soil with a CBR >3 and 200mm in depth if heavier vehicle use is expected. The project engineer should specify the appropriate depth based on the CBR.
- A further geotextile is to be placed over the CCS and the final porous wearing layer laid over the top of that.



Figure 2 - Permanent ground protection examples

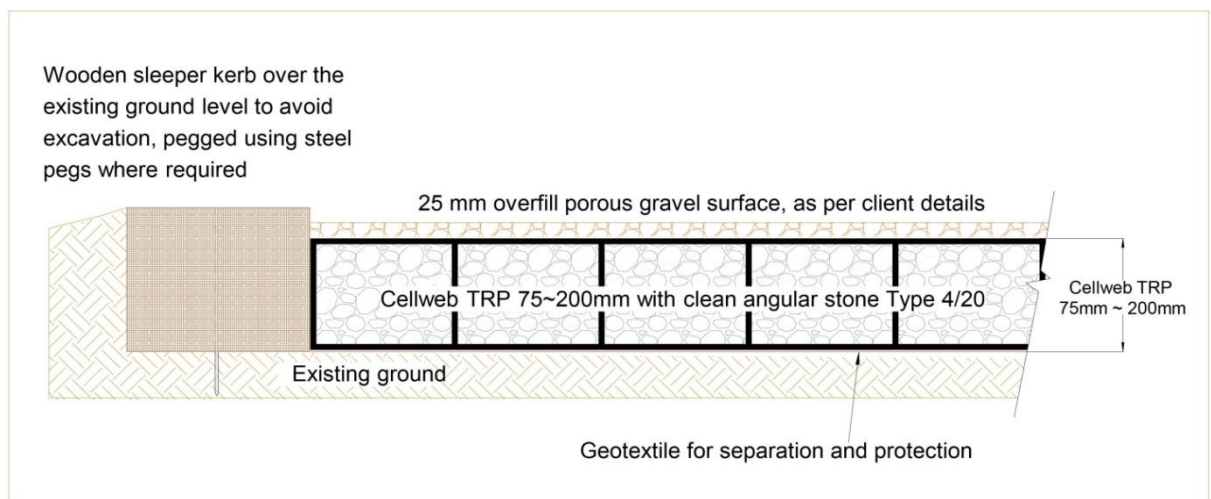


Ground Guard



Cell Web

Figure 3 - Example specification for permanent ground protection (Cellweb)



12. Construction Considerations

- 12.1. All construction is a sufficient distance from the retained trees that special building method or techniques are not required for this site.

13. SOFT LANDSCAPING WORKS

- 13.1. Any soft landscaping works within the development area should be in accordance with the approved landscape plan, and any specification of such works approved by the local planning authority which should adhere to the following British



Standard Specifications and Codes of Practice:

- Trees should be supplied packaged in accordance with the recommendations of BS 3936:1992 Part 1 Nursery Stock - Specification for trees and shrubs;
- BS 4428:1989 - Code of Practice for General Landscaping Operations (excluding hard surfaces);
- BS 8545:2014 Trees from Nursery to Independence in the Landscape;
- The Code of Practice for Plant Handling 2002 (Horticultural Trades Association).

13.2. The construction exclusion zone will remain off limits for all site plant and machinery unless fit for purpose ground protection is installed. Pedestrian traffic must be kept to an absolute minimum only permitted for the ground preparation and landscape installation work.

13.3. The landscaping works will need to be undertaken in such a way as to avoid level changes, deep digging or mechanical rotovation. Excavation of planting pits within the RPA can cause serious harm the root system of retained trees. Planting pits within the RPA of retained trees will be excavated by hand to avoid damage to roots greater than 25mm and masses of smaller roots.

14. INSTALLATION OF BOUNDARY FENCES

14.1. Access within the CEZ for fence construction purposes can also result in soil compaction and deterioration of the soil structure. Concrete used to support the posts is poisonous to plants and which, if not controlled, can leach into the surrounding soil.

14.2. Fencing will need to be designed and constructed to minimise the need for excavation and allow minor variations of up to 300mm between post spacing to allow repositioning of posts where roots which are greater than 25mm are discovered during the excavation of postholes within the RPA of retained trees.

14.3. Postholes within the RPA should be excavated by hand and lined with heavy gauge polythene to prevent contamination of the rooting environment.



- 14.4. Fencing should be installed during period of dry weather so as to maintain soil structure and prevent compaction of the rooting environment.
- 14.5. Where significant traffic over the RPA's is required to install the boundary fence, fit for purpose ground protection will be placed along the line of construction to prevent compaction of the rooting environment of retained trees.
- 14.6. Where tree canopies hang low along the line of the proposed fence crown raising to facilitate construction may be required. This must be undertaken by an arboriculturist.
- 14.7. Bracing any part of the boundary fence from retained trees will not be permitted under any circumstances

15. POST DEVELOPMENT PRESSURES

Shading

The expected shading cast by the trees is based on guidance provided by Building Research Establishment (BRE) in Site Layout Planning for Daylight and Sunlight - A guide to good practice (BRE, 1991). The shade predictions are illustrated on the Tree Protection Plan reference 43/2123/8/13/2025 appended at the end of this document.

Buildings.

Shade predictions are not expected to have an unreasonable impact on the availability of light to living space within the proposed dwellings.

Open spaces.

The shade cast by the retained trees is minimal both at their existing sizes and future size and are not expected to have an unreasonable impact on the reasonable enjoyment of gardens.

Privacy and screening.

The screening provided by the existing trees and hedges can be maintained.

Direct damage.

There are no retained trees which are in such close proximity that would result in



direct damage at their current size or resulting from future growth.

Seasonal nuisance.

The retained trees do not overhang the proposed building and leaf and debris fall is not expected to impact the dwelling over and above what can be considered typical for this type of setting.

Future pressure for removal.

The design of the site does not present any unreasonable impacts or pressures on future residents and no post development pressures for removal are expected.



ARBORICULTURAL METHOD STATEMENT (Preliminary)

16. METHOD AND PHASING OF WORKS

PRE - DEMOLITION/CONSTRUCTION

- 16.1. All permitted or approved tree work will be undertaken prior to the commencement of site preparation, demolition or construction works.
- 16.2. Tree work will be carried out in accordance with the British Standard *“Recommendations for Tree Work”* BS3998:2010, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations.

Table 2 - Tree works summary.

Tree no	Species	Cat	Works required
1-5	Laburnum anagyroides (Laburnum)	C	Remove
T8	Salix caprea (Willow)	C	Remove
G9	Corylus avellana (Hazel)	C	Remove

- 16.3. Prior to the start of any demolition or construction, including material storage, protective barrier will be erected as per BS5837 figure 3 as illustrated in section 10.
- 16.4. It will be positioned as denoted on the tree protection plan reference 43/2123/8/13/2025 B TPP.
- 16.5. Signage informing all site workers that the area is to remain protected for the duration of the development is to be attached to the fence. An example of signage can be found at the end of this document which can be printed, laminated and securely attached to the barrier fence if required.
- 16.6. The project arboriculturalist will be on hand to provide advice and/or supervision if required.



CONSTRUCTION

- 16.7. All barrier fence and ground protection is to remain serviceable and in position for the duration of the development. No adjustments are to be made unless with the written agreement of the planning/arboricultural officer.
- 16.8. Temporary barrier fence will be installed prior to the start of construction ground works and remain in place until the permanent ground protection over the proposed parking spaces is installed.
- 16.9. Landscaping works may be necessary prior to the completion of the build. In this case prohibitions on traffic and movement over the Construction Exclusion Zones will remain in effect and activity will require additional fit for purpose temporary ground protection, no machine movements and the transport of materials into these areas will be made manually.
- 16.10. The project arboriculturalist will be on hand to provide arboricultural advice if it is needed.

POST CONSTRUCTION

- 16.11. Barrier fence and temporary ground protection is to be removed.
- 16.12. Site reinstatement and landscaping will be undertaken. Prohibitions on traffic and movement over the Construction Exclusion Zones will remain in effect and activity will require additional fit for purpose temporary ground protection, no machine movements and the transport of materials into these areas will be made manually.

17. CONTACTS

Organisation	Contact Name	Contact number	Email / online contact
Applicant	-	-	-
Agent	Jon Read, Pentangle Design,	01462 431133	
Harrison Arboriculture	Mark Harrison	07915 847 367	mark@harrisonarboriculture.co.uk
North Hertfordshire District Council	Case officer		



18. DECLARATION

- 18.1. The statements in this report are based on information provided by the client. It does not take into account, the effects of extremes of climate, vandalism or accident. Harrison Arboriculture cannot accept liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice.
- 18.2. The authority of this report is effective for two years from the date of the survey or when any site conditions change or pruning or other works unspecified in the Report are carried out to, or affecting, the subject tree(s), whichever is the sooner. It is recommended that a new survey be carried out after twelve months or following any severe weather event or change in the site.

19. CONCLUSION

- The tree removals required to facilitate the proposals involve only C grade trees.
- Landscaping to include tree planting could mitigate for their loss and improve landscape contribution and biodiversity in the long term.
- The proposed development would not have adverse impacts on the long-term vitality of the retained trees providing the methodology set out in this document are followed.



APPENDIX A – TREE SCHEDULE

Site: Land at Colemans Green and Lower Road, Breachwood Green

Date: 21 August 2025

* Recommendations are provided based on the initial survey independent of the proposal by default. Recommendations in italics within parentheses relate to works required to facilitate the development as identified by the impact assessment.

Tree no	Species	Height/m	Stem Diameter/mm (no. stems)	Age	Condition		Life Exp / yrs	Canopy Height/m				First Significant Branch Hgt/m	Canopy Spread/m				Comments	Recommendations	Category	Root protection	
					Physiological	Structural		N	E	S	W		N	E	S	W				Radius/m	Area/sqm
T1	Laburnum anagyroides (Laburnum)	4	120(1)	Early Mature	Fair	Fair	10+	1.5	1.5	1.5	1.5	1.5(NE)	2	1	1	1	No significant defects noted. (Part of boundary fence)	None required at time of inspection. <i>*(remove to facilitate the development)</i>	C1	1.44	6.52
T2	Laburnum anagyroides (Laburnum)	4	120, 150(2)	Early Mature	Fair	Fair	10+	1.5	1.5	1.5	1.5	1(W)	2	1	1	2.5	No significant defects noted. (Part of boundary fence)	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	2.3	16.62
T3	Laburnum anagyroides (Laburnum)	4	150, 150(2)	Early Mature	Fair	Fair	10+	1.5	1.5	1.5	1.5	1.5(NE)	1	2	3	2	No significant defects noted. (Part of boundary fence)	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	2.54	20.27
T4	Laburnum anagyroides (Laburnum)	4	180(2)	Early Mature	Poor	Fair	10+	1.5	1.5	1.5	1.5	1(W)	1	1.5	1.5	1	Stem divides below 1.5 m. Foliage/bud density thin. (Part of boundary hedge)	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	3.06	29.42
T5	Laburnum anagyroides (Laburnum)	5	120(1)	Semi Mature	Fair	Fair	10+	1.5	1.5	1.5	1.5	1(W)	0	1.5	1.5	1.5	No significant defects noted. (Part of boundary fence)	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	1.44	6.52
T6	Malus species (Apple)	10	250(1)	Semi Mature	Good	Fair	10+	2	3	4	1.5	2(N)	5	5	4	4	No significant defects noted. Off site.	None required at time of inspection.	B2	3	28.28
G7	Malus species (Apple)	3	200(1)	Mature	Fair	Fair	10+										No significant defects noted.	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	2.4	18.1
T8	Salix caprea (Willow)	4	120(1)	Semi Mature	Fair	Fair	10+	0.5	0.5	0.5	0.5	2(N)	2	2	2	1	No significant defects noted. Previously crown reduced.	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	1.44	6.52
G9	Corylus avellana (Hazel)	2.5	<70(10)	Semi Mature	Fair	Fair	10+	0	0	0	0						No significant defects noted. Previously crown reduced.	None required at time of inspection. <i>(remove to facilitate the development)</i>	C1	2.65	22.06



Tree no	Species	Height/m	Stem Diameter/mm (no. stems)	Age	Condition		Life Exp / yrs	Canopy Height/m				First Significant Branch Hgt/m	Canopy Spread/m				Comments	Recommendations	Category	Root protection	
					Physiological	Structural		N	E	S	W		N	E	S	W				Radius/m	Area/sqm
G10	Ilex aquifolium (Holly), Prunus cerasifera (Cherry), Salix caprea (Willow), x Cupressocyparis leylandii (Leyland Cypress)	4	200(1)	Mature	Fair	Fair	10+										No significant defects noted.	None required at time of inspection.	C1	2.4	18.1
T11	Acer campestre (Field Maple)	4.5	200(3)	Mature	Fair	Fair	10+	2	2	2	2	1.5(S)	2	2	2	2	No significant defects noted. Off site. Diameter Estimated. Overhead cables running through/ close to canopy. Previously crown reduced.	None required at time of inspection.	C1	4.15	54.11
T12	Betula pendula (Birch)	16	250(1)	Mature	Poor	Fair	10+	4	5	6	5	1.5(S)	2	2	2	2	Foliage/bud density thin.	None required at time of inspection.	C1	3	28.28



Key

1. Tree Ref No:

This relates to the numbers on the plan. Where trees have been tagged, the tag number will be used as the tree reference number. Individual trees are not prefixed and prefixed with a G, W or H represent a group, woodland or hedge respectively.

2. Species:

The name given is the Latin name by default. Where common names are given they are shown in parentheses.

3. DBH (Diameter at breast height):

This is the stem diameter at 1.5 metres (breast height) above ground level, given in millimetres. Where trees are multi-stemmed trees the square root of the combined stem diameter is calculated.

4. H (Height):

The height of the tree measured where possible or estimated and recorded in metres.

5. Canopy Spread (Crown radius):

The average crown spread taken from the centre of the trunk to the tips of the live lateral branches given in metres. Measurements following the compass points North, East, South and West.

6. Canopy height:

Ave - Average Crown Height Clearance: (HaB Height above ground) — ground clearance of the canopy for each cardinal point given in metres.

7. First significant branch

The height of the first significant branch the direction of which is shown in parentheses.

8. Age:

Age assessment is based on growth stages rather than actual age in years and are recorded as follows

Y Young



SM Semi Mature – having reached up to 1/3 life expectancy

EM Early mature - having reached 1/3 of the expected life expectancy and is transitioning into maturity.

M Mature - over 2/3 life expectancy

OM Over-mature - fully mature, past peak condition and beginning to decline

V Veteran - trees of interest biologically, aesthetically or culturally because of significant age.

9. Condition

Physiological – Assessment of the overall health and vigour of the tree compared to what would normally be considered typical of a healthy tree of the species.

Condition categories are given as good, fair, poor or dead.

Structural – Assessment of the structural stability of the tree based on visible signs of decay, damage, genetic weaknesses or faults. Structural categories are given as good, fair, poor or dead

10. Life Expectancy:

An estimate of the potential worthwhile remaining contribution – future life expectancy of the tree(s) in the present setting given normal circumstances, given in years (< = less than > = greater than) categorised <10 years, 10 – 20 years, 20 – 40 years and > 40 years.

11. Category:

A quality assessment of the trees based on criteria detailed in BS5837:2012 Table 1

U: Trees unsuitable for retention

A: Those of high quality and value

B: Those of moderate quality and value

C: Those of low quality and value

Assessments are based on their condition on the day of inspection and cannot account for future changes in circumstances.

12. Recommendations:

Preliminary management recommendations in relation to the proposed



development are made where appropriate. These may include remedial tree works that are deemed necessary to improve the quality of the tree or for safety reasons. Recommended tree works will be required to be in accordance with British Standard 3998:2010 Tree Work.

13. Root Protection

Radius – nominal circle centred at the stem centre providing the recommended radius of a circular area necessary for the continue wellbeing of the tree based on recommendations provided in British Standard 5837:2012

Area – The area necessary for the continue wellbeing of the tree based on recommendations provided in British Standard 5837:2012



Table 1

Category and definition	Criteria			Identification on plan
Category U Those in such a condition that cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve</i>			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria — Subcategories			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values, including conservation	
Category A Tree of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B. Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention beyond 40 years; of trees lacking the special quality necessary to merit A categorisation	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with material conservation or other cultural benefits	MID BLUE
Category C. Trees of low quality with an estimated life expectancy of at least 10 years, or younger trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation			



Appendix B – Generic information

TREE SURVEY

Scope and Limitations of Survey

1. This survey and report are concerned with the arboricultural aspects of the site only.
2. Only trees of significant stature were surveyed. Trees with a stem diameter of less than 75mm when measured at 1.5m above ground level (DBH) have been excluded unless they have particular merit that warrants comment.
3. The survey is restricted to trees that will be affected by the development within and adjacent to the site in accordance with guidelines detailed in British Standard 5837:2012 and with good practice as promoted by the Arboricultural Association and Arboricultural and Forestry Advisory Group (AFAG).
4. This survey is based on a ground level tree assessment and examination of external features only — described as the 'Visual Tree Assessment' (Mattheck and Breloer, The Body Language of Trees, DoE booklet Research for Amenity Trees No. 4, 1994). Although the structural conditions of the trees are considered and remedial action may be recommended it does not constitute a comprehensive Health and Safety report and if one is required it should be commissioned separately. No tissue samples were taken or internal investigations carried out.
5. No soil samples were taken or soil analyses carried out and the risk of tree-related subsidence to structures has not been assessed.
6. Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Tree work should ideally be carried out during the dormant period from November through to February and then again from June to August.
7. Although considered and wildlife habitat potential highlighted, no specific wildlife assessment has been carried out. It should be noted that The Wildlife and Countryside Act 1981, as amended by the Countryside Rights of Way Act 2000 and Conservation - Natural Habitats -Regulations 1994 provides statutory



protection to birds, bats and other species that inhabit trees.

8. This report should be read in conjunction with the Tree Protection Plan. The position of all trees and existing or proposed features are based on the plans provided by the client or other instructed professionals. Where trees have been omitted from the plans provided their position has been estimated or where possible plotted by triangulation.

Survey Method

1. In order to provide a systematic and consistent evaluation of the trees situated on the site, the following methodology was used in accordance with BS 5837: 2012.
2. The stem diameters of single stemmed trees were measured in millimetres at 1.5m above ground level (DBH). Multi-stemmed trees were measured at 1.5m above ground level and the RPA arrived at as per section 4.6a BS 5837:2012.
3. The height of visible trees was measured using a clinometer and estimated visually where view to the upper canopy obstructed.
4. The crown radii were measured where possible or estimated where access is restricted and are given for each cardinal point.
5. Where access to trees was obstructed or obscured, dimensions have been estimated.
6. Each tree has been assessed in terms of its arboricultural, landscape, cultural and conservation values in accordance with BS 5837: 2012 which are detailed in the Tree Schedule.



CONSTRUCTION EXCLUSION ZONE

BARRIER FENCE MUST NOT BE MOVED

**THE FOLLOWING IS PROHIBITED WITHIN THE
PROTECTED AREA**

No excavation, mechanical or otherwise

No adjustment to ground levels

No storage of plant or material

No storage or handling of any chemicals

No vehicular access

No fires



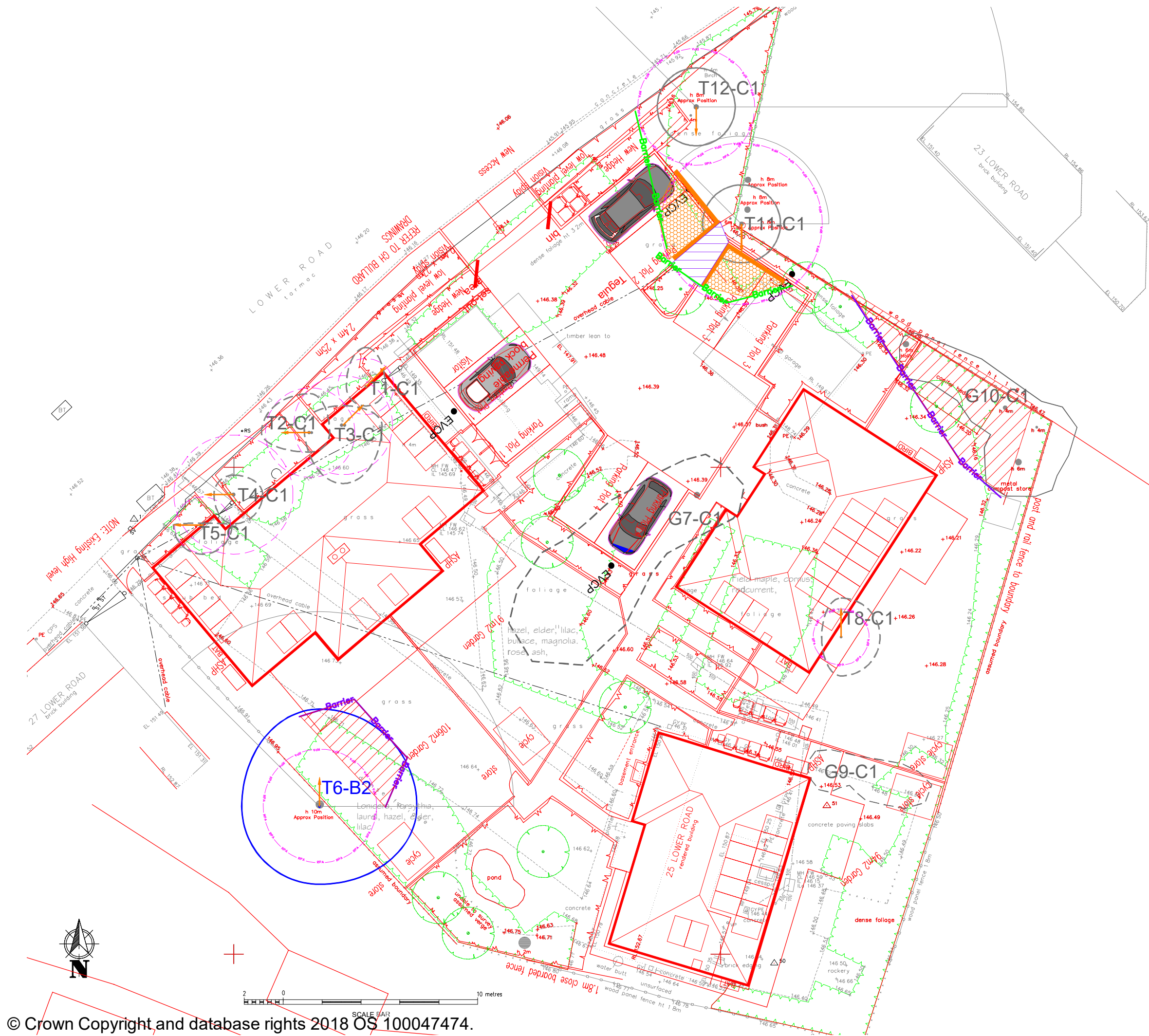
Additional examples of suitable signage





REFERENCES

- BRE. (1991). *Site Layout Planning For Daylight and Sunlight - A guide to good practice*. Construction Research Communications Ltd.
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- Lonsdale, D. (2001). *Principles of Tree Hazard Assessment and Management*. London: HMSO.
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Legend

This survey is related to the GPS rapid site survey applied to the site taken from the survey.

Category A trees - Trees of high quality and value such that they make a substantial existing and future contribution for an expected 40 years or more.

Category B trees - Trees of moderate quality and value such that they make a significant future contribution for an expected 20 years or more.

Category C trees - Trees of low quality and value which might be expected to remain for around 10 years or less or with stems of less than 150 mm diameter.

Category U trees - Trees of low quality and value which are considered to have little or no potential due to disease or defects.

Number suffixes relate to the subcategories 1, 2 and 3 which are intended to reflect arboricultural, landscape and cultural values respectively.

Direction of the first significant branch

The root protection area is the theoretical area considered necessary to provide sufficient room for the root growth required to support the tree - activity impacting the soil should be avoided.

The construction exclusion zone (CEZ) is the area within the root protection area. Access into this area should be prohibited for the duration of the project unless suitably protected to prevent any construction activities including storage.

Barrier fence to be installed as per BS5837, section 6, Figure 3.

Figure 3 BS 5837 : 2012 - Default Specification for Protective Barrier

Temporary barrier fence to be installed as per BS5837, section 6, Figure 3. To remain in place until permanent protection (CCS) is installed.

Material storage and mixing to be confined to these areas.

Permanent ground protection provides protection to roots and underlying soil within the RPA's of retained trees during and subsequent to the development.

Temporary ground protection provides protection to roots and underlying soil within the RPA's of retained trees during the development to provide work space.

Proposals

Trees to be removed to facilitate the development (dashed line of category colour)

The shade prediction is based on guidance provided by Building Research Establishment (BRE) in Site Layout Planning for Daylight and Sunlight - A guide to good practice (BRE, 1991). It provides an estimate of the shaded area.

CLIENT	Pentangle Design									
SITE	Lower Road, Breachwood Green									
DRAWING	Title	Tree Protection Plan								
	Version	0.1			Revision	A				
	Base plan ref.	OS Mastermap / 3870 DSC Proposed Site Plan								
DRAWING NO.	43-2123-8/13/2025 (B) TPP									
SCALE	1:200 @ A3									
DATE	9 October 2025									
DRAWN BY	M.Harrison									
Harrison Arboriculture Ltd.										
										
Telephone - 07915 847 367										
email: admin@harrisonarboriculture.co.uk										